

PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of

Hans Johann HORN

Appln. No.:

Filed: December 20, 2001

For: RING BINDER MECHANISM

Attorney Docket No.: 3827.083

PRELIMINARY AMENDMENT

Attn: Box PCT  
Honorable Commissioner of  
Patents and Trademarks  
P.O. Box 2327  
Arlington, VA 22202

Sir:

Prior to examination of the above-identified application,  
please amend the application as follows:

IN THE CLAIMS (CLEAN VERSION):

Please delete original Claims 1-45 and add the following new  
Claims 46-90:

46. Ring binder mechanism with a housing (10) having a C- or U-shaped cross-section with spring-elastic bendable flanks (28) for two carrier rails (20), which carrier rails on their facing longitudinal edges lie against each other forming a linkage axis (22) and with their away-facing longitudinal edges (24) engage in mounting grooves (26) in the housing flanks (28), and with at least two half-rings (16) longitudinally spaced apart and rigidly connected with each of the carrier rails (20) and which extend through openings (12) in a housing wall (13) and pairwise form a

ring (14), wherein the carrier rails (20) are limitedly pivotable against each other about the linkage axis (22) between an open position and a closed position upon overcoming a spring force produced by the bending open of the housing flanks (28), while taking along the half-rings (16), and wherein at least one blocking element (32, 32') is provided slideable via operating element (18) essentially parallel to the linkage axis (22), slideable relative to the housing (10) and to the carrier rails (20) which, in the closed position, protrudes into a free space (34) formed between the carrier rails (20) and the housing wall (13) with blockage of the pivot movement of the carrier rails (20) and, in the open position, unblocks the pivot movement of the carrier rails (20) about the linkage axis (22), thereby characterized, that at least one blocking element (32, 32') is pre-tensioned in the direction of the closed position under the influence of a closing spring (36, 36').

47. Ring binder mechanism according to Claim 46, wherein the operating element (18) is formed as a operating lever pivotable with respect to the housing (10).
48. Ring binder mechanism according to Claim 46, wherein the at least one blocking element (32, 32') is slideable in the open direction via the operating element (18) against the force of the closing spring (36, 36'), and is thereby unlockable.
49. Ring binder mechanism according to Claim 46, wherein the at least one blocking element (32, 32') when in the open position lies against an opening detent (38, 110) under the influence of the closing spring (36, 36').

50. Ring binder mechanism according to Claim 49, wherein the at least one blocking element (32, 32') is releaseable in the closing direction via the operating element (18) out of the opening detent (38, 40) against the force of the closing spring (36, 36').
51. Ring binder mechanism according to Claim 50, wherein the at least one blocking element (32, 32') is automatically lockable in the closed direction under the influence of the pre-tensioned closing spring (36, 36').
52. Ring binder mechanism according to Claim 47, wherein the operating lever (18) includes an opening arm (40) abutting against the carrier rails (20) in the open position and which pivots these from the closed into the open position while overcoming of the spring force produced by the housing flanks (28).
53. Ring binder mechanism according to Claim 47, wherein the operating lever (18) includes a closing arm (42) abutting against the carrier rails (20) in the closing direction and which pivots these from the open position into the closed position while overcoming of the spring force produced by the housing flanks (28).
54. Ring binder mechanism according to Claim 46, wherein the at least one blocking element (32, 32') is slideable in the closing direction against the force of the closing springs (36, 36'), and thereby releasable out of the opening detent (38, 110), directly by operation of the half-rings (16), or indirectly via the carrier rails (20).

55. Ring binder mechanism according to Claim 47, wherein the operating lever (18) in the open and/or closed direction exhibits at least two operating positions effective in different angular positions for a consequential operation of the at least one blocking element (32, 32') and the carrier rails (20).
56. Ring binder mechanism according to one of Claim 47, wherein the blocking element (32) is provided on a lever arm (100) rigidly connected with the operating lever (18), and that the operating lever (18) is limitedly pivotable relative to the housing (10) and to the carrier rails (20) in the sliding direction of the blocking element (32).
57. Ring binder mechanism according to Claim 56, wherein the blocking spring (36) is tensioned in between a housing fixed abutment and an operating lever fixed abutment (104, 102).
58. Ring binder mechanism according to Claim 57, wherein the blocking spring (36) is a shank spring.
59. Ring binder mechanism according to Claim 56, wherein the operating lever (18) includes a control curve (108) guided on one control edge (106) of the housing (10), via which the operating lever (18) and the blocking element (32) during pivoting against the force of the closing spring (36) are slideable from a closing position in the direction of the open position.
60. Ring binder mechanism according to Claim 59, wherein the operating lever (18) is rigidly connected with an opening

arm (40) acting, in the opening direction, against the carrier rails.

61. Ring binder mechanism according to Claim 60, wherein the opening arm (40) is provided in such a separation from the blocking element (32), that the blocking element (32) in the closed position of the operating lever (18) and the carrier rails (20) is insertable in the free space (34) between the carrier rails (20) and the housing wall (13) under the influence of the closing spring (36), and in the open position abuts against a housing-fixed detent (110) under the influence of the closing spring (36).
62. Ring binder mechanism according to Claim 61, wherein the blocking element (32) is simultaneously a closing arm (42) acting in the closing direction against the carrier rails (20).
63. Ring binder mechanism according to Claim 56, wherein the operating lever (18) includes at least one pivot pin element (112), which lies in the open position of the operating lever (18) against a housing fixed mounting surface (114) under the influence of the closing spring (36) and forms a pivot axis for the blocking element (32) during the disengagement or unblocking and closing movement.
64. Ring binder mechanism according to Claim 63, wherein the pivot pin element (112), in the closed position of the operating lever (18), is raised from the housing-fixed mounting surface (114).

65. Ring binder mechanism according to Claim 56, wherein the control curve (108) is provided on a control arm (120) extending through a wall opening (116) of the housing (10) and through a through-hole (118) in the linkage axis (22) area between the carrier rails (20).
66. Ring binder mechanism according to Claim 65, wherein the control edge (106) is formed by a preferably curved border edge of the wall opening (116).
67. Ring binder mechanism according to Claim 56, wherein the blocking element (32) is provided on a lever arm (100) extending through a wall opening (116) in the housing.
68. Ring binder mechanism according to Claim 67, wherein the housing fixed detent (110) is formed by a preferably curved border edge of the wall opening (116).
69. Ring binder mechanism according to Claim 56, wherein the blocking element (32) abuts in the closed direction, under the influence of the closing spring (36), against a housing-fixed end-stop (122).
70. Ring binder mechanism according to Claim 69, wherein the end abutment (122) is wedge-shaped in the closing direction.
71. Ring binder mechanism according to Claim 69, wherein the end abutment (122) is formed by a bowing out of the housing wall (13) protruding into the free space (34).
72. Ring binder mechanism according to Claim 56, wherein the operating lever (18) is mounted and guided on the housing

(10) in the intermediate area between the rings (14), and includes an operating arm (18') extending through the loop of one of the rings (14).

73. Ring binder mechanism according to Claim 72, wherein the operating arm (18') is directed away from the lever arm (100) carrying the blocking element (32).
74. Ring binder mechanism according to Claim 72, wherein the operating arm (18') faces the same side as the blocking element (32) carrying lever arm (100).
75. Ring binder mechanism according to Claim 47, wherein the at least one blocking element is rigidly provided on a control rod, preferably formed as a pull rod, which via the operating lever (18), under the influence of the closing spring, is limitedly slideable in the longitudinal direction of the carrier rails (20) relative to the housing (10).
76. Ring binder mechanism according to Claim 75, wherein the closing spring is a pressure spring.
77. Ring binder mechanism according to Claim 76, wherein the operating lever (18) is provided at one end of the control rod and that the closing spring is tensioned in between the other end of the control rod and a housing fixed abutment.
78. Ring binder mechanism according to Claim 77, wherein the operating lever (18) pulls against the control rod in the open position against the pressure force of the closing spring.

79. Ring binder mechanism according to Claim 75, wherein the operating lever (18) is rigidly connected with an opening arm acting in the opening direction against the carrier rails.
80. Ring binder mechanism according to Claim 75, wherein the operating lever (18) is rigidly connected with a closing arm acting in the closing direction against the carrier rails.
81. Ring binder mechanism according to one of Claims 47, wherein at least one blocking element (32, 32') is connected with the operating lever (18) via a tensioning member (44, 44') and a closing spring (36, 36') integrated in the tension member.
82. Ring binder mechanism according to Claim 81, wherein each blocking element (32, 32') is associated with a tension member (44, 44').
83. Ring binder mechanism according to Claim 82, wherein at least two of the tension members (44, 44') are unitarily connected with each other, preferably via a connecting bridge (46).
84. Ring binder mechanism according to Claim 81, wherein each blocking element (32, 32') is associated with a closing spring (36, 36').
85. Ring binder mechanism according to Claim 81, wherein the tension member (44, 44') is a piece of wire.



86. Ring binder mechanism according to Claim 81, wherein the closing spring (36, 36') is a shank spring integrated in the tension member (44, 44'), of which one leg (48) is connected with the operating lever (18) and the other leg (50) is supported on a housing-fixed or carrier rail-fixed mount (52) and is fixed spaced apart from the support point on the associated blocking element (32, 32').
87. Ring binder mechanism according to Claim 81, wherein the at least one blocking element (32, 32') is formed as a sliding element guided in a guide slot or through-hole (54) between the two carrier rails (20), which exhibits a wedge shaped closing surface (36) facing in the closing direction, which in the closed position engages in the free space (34).
88. Ring binder mechanism according to Claim 87, wherein the sliding element exhibits a face (58) which is wedge or arrow-shaped in the closing direction, and that the guide through-hole (54), on its bordering edge (38) facing the end face (58), exhibits a thereto complimentary arrow shape.
89. Ring binder mechanism according to Claim 81, wherein the operating lever (18) is rigidly connected with an opening arm (40) which lies, when moved in the opening direction, against the carrier rails (20).
90. Ring binder mechanism according to Claim 81, wherein the operating lever (18) is rigidly connected with a closing arm (42) which lies, when moved in the closing direction, against the carrier rails (20).

U.S. Application No.:  
PRELIMINARY AMENDMENT

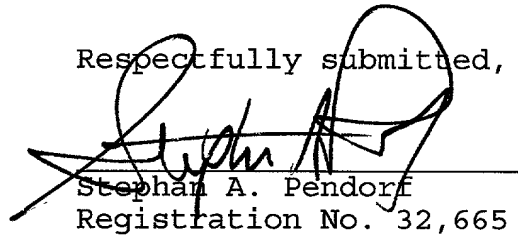
Attorney Docket: 3827.083

REMARKS

The claims have been amended in order to eliminate multiple dependent claims and claims improperly depending from multiple dependent claims, and to otherwise conform the claims to U.S. practice. Care has been taken to ensure that no new matter is added to the text.

Entry and favorable consideration prior to consideration are respectfully requested.

Respectfully submitted,



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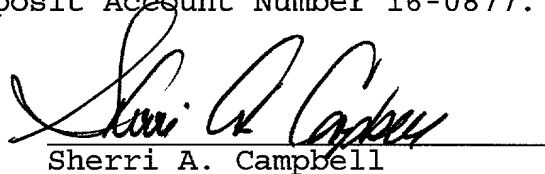
EXPRESS MAIL CERTIFICATE

"EXPRESS MAIL" MAILING LABEL NUMBER: EL568148051US

DATE OF DEPOSIT: December 20, 2001

I HEREBY CERTIFY that the foregoing Preliminary Amendment and a stamped receipt post card are being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 C.F.R. §1.10 on the date indicated and is addressed: ATTN: Box PCT, Commissioner of Patents and Trademarks, Washington, D.C. 20231.

The Commissioner is hereby authorized to charge any additional fees which may be required at any time during the prosecution of this application without specific authorization, or credit any overpayment, to Deposit Account Number 16-0877.



Sherri A. Campbell

VERSION WITH MARKINGS TO SHOW CHANGES MADE

The Examiner is requested to accept the marked-up version as it is based on the previous version, which when modified as below, produces the clean version submitted with the current amendment.

Please amend the claims as follows:

Please delete original Claims 1-45.

Please add the following new Claims 46-90:

- 46. Ring binder mechanism with a housing (10) having a C- or U-shaped cross-section with spring-elastic bendable flanks (28) for two carrier rails (20), which carrier rails on their facing longitudinal edges lie against each other forming a linkage axis (22) and with their away-facing longitudinal edges (24) engage in mounting grooves (26) in the housing flanks (28), and with at least two half-rings (16) longitudinally spaced apart and rigidly connected with each of the carrier rails (20) and which extend through openings (12) in a housing wall (13) and pairwise form a ring (14), wherein the carrier rails (20) are limitedly pivotable against each other about the linkage axis (22) between an open position and a closed position upon overcoming a spring forced produced by the bending open of the housing flanks (28), while taking along the half-rings (16), and wherein at least one blocking element (32, 32') is provided slideable via operating element (18) essentially parallel to the linkage axis (22), slideable relative to the housing (10) and to the carrier rails (20) which, in the closed position, protrudes into a free space (34) formed between the carrier rails (20) and the housing wall (13)

with blockage of the pivot movement of the carrier rails (20) and, in the open position, unblocks the pivot movement of the carrier rails (20) about the linkage axis (22), thereby characterized, that at least one blocking element (32, 32') is pre-tensioned in the direction of the closed position under the influence of a closing spring (36, 36').

47. Ring binder mechanism according to Claim 46, wherein the operating element (18) is formed as a operating lever pivotable with respect to the housing (10).
48. Ring binder mechanism according to Claim 46, wherein the at least one blocking element (32, 32') is slideable in the open direction via the operating element (18) against the force of the closing spring (36, 36'), and is thereby unlockable.
49. Ring binder mechanism according to Claim 46, wherein the at least one blocking element (32, 32') when in the open position lies against an opening detent (38, 110) under the influence of the closing spring (36, 36').
50. Ring binder mechanism according to Claim 49, wherein the at least one blocking element (32, 32') is releaseable in the closing direction via the operating element (18) out of the opening detent (38, 40) against the force of the closing spring (36, 36').
51. Ring binder mechanism according to Claim 50, wherein the at least one blocking element (32, 32') is automatically lockable in the closed direction under the influence of the pre-tensioned closing spring (36, 36').

52. Ring binder mechanism according to Claim 47, wherein the operating lever (18) includes an opening arm (40) abutting against the carrier rails (20) in the open position and which pivots these from the closed into the open position while overcoming of the spring force produced by the housing flanks (28).
53. Ring binder mechanism according to Claim 47, wherein the operating lever (18) includes a closing arm (42) abutting against the carrier rails (20) in the closing direction and which pivots these from the open position into the closed position while overcoming of the spring force produced by the housing flanks (28).
54. Ring binder mechanism according to Claim 46, wherein the at least one blocking element (32, 32') is slideable in the closing direction against the force of the closing springs (36, 36'), and thereby releasable out of the opening detent (38, 110), directly by operation of the half-rings (16), or indirectly via the carrier rails (20).
55. Ring binder mechanism according to Claim 47, wherein the operating lever (18) in the open and/or closed direction exhibits at least two operating positions effective in different angular positions for a consequential operation of the at least one blocking element (32, 32') and the carrier rails (20).
56. Ring binder mechanism according to one of Claim 47, wherein the blocking element (32) is provided on a lever arm (100) rigidly connected with the operating lever (18), and that

the operating lever (18) is limitedly pivotable relative to the housing (10) and to the carrier rails (20) in the sliding direction of the blocking element (32).

57. Ring binder mechanism according to Claim 56, wherein the blocking spring (36) is tensioned in between a housing fixed abutment and an operating lever fixed abutment (104, 102).
58. Ring binder mechanism according to Claim 57, wherein the blocking spring (36) is a shank spring.
59. Ring binder mechanism according to Claim 56, wherein the operating lever (18) includes a control curve (108) guided on one control edge (106) of the housing (10), via which the operating lever (18) and the blocking element (32) during pivoting against the force of the closing spring (36) are slideable from a closing position in the direction of the open position.
60. Ring binder mechanism according to Claim 59, wherein the operating lever (18) is rigidly connected with an opening arm (40) acting, in the opening direction, against the carrier rails.
61. Ring binder mechanism according to Claim 60, wherein the opening arm (40) is provided in such a separation from the blocking element (32), that the blocking element (32) in the closed position of the operating lever (18) and the carrier rails (20) is insertable in the free space (34) between the carrier rails (20) and the housing wall (13) under the influence of the closing spring (36), and in the open

position abuts against a housing-fixed detent (110) under the influence of the closing spring (36).

62. Ring binder mechanism according to Claim 61, wherein the blocking element (32) is simultaneously a closing arm (42) acting in the closing direction against the carrier rails (20).
63. Ring binder mechanism according to Claim 56, wherein the operating lever (18) includes at least one pivot pin element (112), which lies in the open position of the operating lever (18) against a housing fixed mounting surface (114) under the influence of the closing spring (36) and forms a pivot axis for the blocking element (32) during the disengagement or unblocking and closing movement.
64. Ring binder mechanism according to Claim 63, wherein the pivot pin element (112), in the closed position of the operating lever (18), is raised from the housing-fixed mounting surface (114).
65. Ring binder mechanism according to Claim 56, wherein the control curve (108) is provided on a control arm (120) extending through a wall opening (116) of the housing (10) and through a through-hole (118) in the linkage axis (22) area between the carrier rails (20).
66. Ring binder mechanism according to Claim 65, wherein the control edge (106) is formed by a preferably curved border edge of the wall opening (116).

67. Ring binder mechanism according to Claim 56, wherein the blocking element (32) is provided on a lever arm (100) extending through a wall opening (116) in the housing.
68. Ring binder mechanism according to Claim 67, wherein the housing fixed detent (110) is formed by a preferably curved border edge of the wall opening (116).
69. Ring binder mechanism according to Claim 56, wherein the blocking element (32) abuts in the closed direction, under the influence of the closing spring (36), against a housing-fixed end-stop (122).
70. Ring binder mechanism according to Claim 69, wherein the end abutment (122) is wedge-shaped in the closing direction.
71. Ring binder mechanism according to Claim 69, wherein the end abutment (122) is formed by a bowing out of the housing wall (13) protruding into the free space (34).
72. Ring binder mechanism according to Claim 56, wherein the operating lever (18) is mounted and guided on the housing (10) in the intermediate area between the rings (14), and includes an operating arm (18') extending through the loop of one of the rings (14).
73. Ring binder mechanism according to Claim 72, wherein the operating arm (18') is directed away from the lever arm (100) carrying the blocking element (32).



74. Ring binder mechanism according to Claim 72, wherein the operating arm (18') faces the same side as the blocking element (32) carrying lever arm (100).
75. Ring binder mechanism according to Claim 47, wherein the at least one blocking element is rigidly provided on a control rod, preferably formed as a pull rod, which via the operating lever (18), under the influence of the closing spring, is limitedly slideable in the longitudinal direction of the carrier rails (20) relative to the housing (10).
76. Ring binder mechanism according to Claim 75, wherein the closing spring is a pressure spring.
77. Ring binder mechanism according to Claim 76, wherein the operating lever (18) is provided at one end of the control rod and that the closing spring is tensioned in between the other end of the control rod and a housing fixed abutment.
78. Ring binder mechanism according to Claim 77, wherein the operating lever (18) pulls against the control rod in the open position against the pressure force of the closing spring.
79. Ring binder mechanism according to Claim 75, wherein the operating lever (18) is rigidly connected with an opening arm acting in the opening direction against the carrier rails.
80. Ring binder mechanism according to Claim 75, wherein the operating lever (18) is rigidly connected with a closing arm acting in the closing direction against the carrier rails.

81. Ring binder mechanism according to one of Claims 47, wherein at least one blocking element (32, 32') is connected with the operating lever (18) via a tensioning member (44, 44') and a closing spring (36, 36') integrated in the tension member.
82. Ring binder mechanism according to Claim 81, wherein each blocking element (32, 32') is associated with a tension member (44, 44').
83. Ring binder mechanism according to Claim 82, wherein at least two of the tension members (44, 44') are unitarily connected with each other, preferably via a connecting bridge (46).
84. Ring binder mechanism according to Claim 81, wherein each blocking element (32, 32') is associated with a closing spring (36, 36').
85. Ring binder mechanism according to Claim 81, wherein the tension member (44, 44') is a piece of wire.
86. Ring binder mechanism according to Claim 81, wherein the closing spring (36, 36') is a shank spring integrated in the tension member (44, 44'), of which one leg (48) is connected with the operating lever (18) and the other leg (50) is supported on a housing-fixed or carrier rail-fixed mount (52) and is fixed spaced apart from the support point on the associated blocking element (32, 32').

87. Ring binder mechanism according to Claim 81, wherein the at least one blocking element (32, 32') is formed as a sliding element guided in a guide slot or through-hole (54) between the two carrier rails (20), which exhibits a wedge shaped closing surface (36) facing in the closing direction, which in the closed position engages in the free space (34).
88. Ring binder mechanism according to Claim 87, wherein the sliding element exhibits a face (58) which is wedge or arrow-shaped in the closing direction, and that the guide through-hole (54), on its bordering edge (38) facing the end face (58), exhibits a thereto complimentary arrow shape.
89. Ring binder mechanism according to Claim 81, wherein the operating lever (18) is rigidly connected with an opening arm (40) which lies, when moved in the opening direction, against the carrier rails (20).
90. Ring binder mechanism according to Claim 81, wherein the operating lever (18) is rigidly connected with a closing arm (42) which lies, when moved in the closing direction, against the carrier rails (20).--